

IN THE CLAIMS

1. (currently amended) A complement inhibitor polypeptide derived from a haematophagous arthropod molecule that inhibits the classical complement pathway and the alternative complement pathway by inhibiting cleavage of C5 by classical and alternative C5 convertases.
2. (canceled).
3. (canceled).
4. (canceled).
5. (canceled).
6. (currently amended) The A complement inhibitor polypeptide according to claim 1 2 which inhibits cleavage of C5 by binding to C5.
7. (currently amended) The A complement inhibitor polypeptide molecule according to claim 6 complexed with C5.
8. (canceled).
9. (currently amended) The A complement inhibitor polypeptide molecule according to claim 1 8 wherein said haematophagous arthropod is a tick.
10. (currently amended) The A complement inhibitor polypeptide molecule according to claim 9, wherein said tick is *Ornithodoros moubata*.
11. (currently amended) The A complement inhibitor polypeptide molecule according to claim 10, comprising amino acids 19 to 168 of the amino acid sequence of SEQ ID NO: 2 in Figure 4 or a functional equivalent thereof.
12. (currently amended) The A complement inhibitor polypeptide molecule according to claim 10, comprising amino acids 1 to 168 of the amino acid sequence of SEQ ID NO: 2 in Figure 4 or a functional equivalent thereof.

13. (currently amended) The A complement inhibitor polypeptide molecule that inhibits the classical complement pathway and the alternative complement pathway, wherein said complement inhibitor is:

- a protein comprising amino acids 19 to 168 or amino acids 1 to 168 of the amino acid sequence of SEQ ID NO: 2 in Figure 4;
- a homologue of a protein as defined in a) having at least 90% 60% identity thereto; or
- an active fragment of a protein as defined in a) above that inhibits cleavage of C5 by classical and alternative C5 convertases ~~or of a homologue as defined in b) above~~.

14. (currently amended) The A complement inhibitor polypeptide molecule that inhibits cleavage of C5 by a C5 convertase, wherein said complement inhibitor is:

- a protein comprising amino acids 19 to 168 or amino acids 1 to 168 of the amino acid sequence of SEQ ID NO: 2 in Figure 4;
- a homologue of a protein as defined in a) having at least 90% 60% identity thereto; or
- an active fragment of a protein as defined in a) above that inhibits cleavage of C5 by classical and alternative C5 convertases ~~or of a homologue as defined in b) above~~.

15. (currently amended) The A complement inhibitor polypeptide molecule according to claim 14 which inhibits cleavage of C5 by direct binding to C5.

16. (currently amended) The A complement inhibitor polypeptide molecule according to claim 15 complexed with C5.

17. (previously presented) An antibody which binds to a complement inhibitor molecule or a functional equivalent thereof according to claim 1.

18. (currently amended) A fusion protein comprising the a complement inhibitor polypeptide molecule ~~or a functional equivalent thereof~~ according to claim 1 that is genetically or chemically fused to one or more peptides or polypeptides.

19. (currently amended) The A fusion protein according to claim 18 wherein said complement inhibitor polypeptide molecule or functional equivalent thereof is genetically or chemically fused to a marker domain.

20. (currently amended) The A fusion protein according to claim 19 wherein said marker domain is a radiochemical tag.

21. (previously presented) A nucleic acid molecule comprising a nucleotide sequence encoding a complement inhibitor molecule or a functional equivalent thereof according to claim 1 or a fusion protein thereof, said fusion protein comprising said complement inhibitor molecule or functional equivalent thereof, that is genetically or chemically fused to one or more peptides or polypeptides.

22. (original) A nucleic acid molecule according to claim 21 comprising nucleotides 53 to 507 of the nucleotide sequence in Figure 4 or a functional equivalent thereof.

23. (original) A nucleic acid molecule according to claim 21 comprising nucleotides 1 to 507 of the nucleotide sequence in Figure 4 or a functional equivalent thereof.

24. (previously presented) An antisense nucleic acid molecule which hybridises under high stringency hybridisation conditions to a nucleic acid molecule according to claim 21.

25. (previously presented) A vector comprising a nucleic acid molecule according to claim 21 or an antisense nucleic acid molecule which hybridizes under high stringency hybridization conditions to said nucleic acid molecule.

26. (previously presented) A host cell comprising a nucleic acid molecule according to claim 21, an antisense nucleic acid molecule which hybridizes under high stringency hybridization conditions to said nucleic acid molecule, or a vector comprising said nucleic acid molecule.

27. (currently amended) A method for preparing the a complement inhibitor polypeptide molecule or a functional equivalent thereof according to claim 1 or a fusion protein thereof, comprising culturing a host cell under conditions whereby said protein is expressed and recovering said protein thus produced, said host cell comprising a nucleic acid molecule, an antisense nucleic

acid molecule, or a vector, and said nucleic acid molecule comprising a nucleotide sequence encoding said complement inhibitor molecule or equivalent thereof.

28. (previously presented) A method of identifying a ligand of a complement inhibitor molecule or a functional equivalent thereof according to claim 1 comprising the step of:

- (a) contacting the complement inhibitor molecule or functional equivalent thereof with a candidate ligand; and
- (b) detecting the formation of a ligand-complement inhibitor molecule complex.

29. (currently amended) A composition comprising the a complement inhibitor polypeptide molecule according to claim 1, a fusion protein thereof, or a nucleic acid molecule comprising a nucleotide sequence encoding said complement inhibitor polypeptide molecule or equivalent thereof, in conjunction with a pharmaceutically acceptable carrier.

30. (currently amended) The A composition according to claim 29 further comprising an adjuvant.

31. (canceled).

32. (previously presented) A method of treating an animal suffering from a complement-mediated disease or disorder or preventing an animal developing a complement-mediated disease or disorder comprising administering to said animal a complement inhibitor molecule or a functional equivalent thereof according to claim 1, a fusion protein thereof, a nucleic acid molecule comprising a nucleotide sequence encoding said complement inhibitor molecule or equivalent thereof, in conjunction with a pharmaceutically acceptable carrier, or a composition comprising any of the foregoing, in a therapeutically or prophylactically effective amount.

33. (canceled).

34. (previously presented) A method according to claim 32 wherein said disease or disorder is Alzheimer's disease, rheumatoid arthritis, glomerulonephritis, reperfusion injury, transplant rejection, sepsis, immune complex disorder or delayed-type hypersensitivity.

35. (previously presented) A method of vaccinating an animal against a disease or disorder transmitted by a haematophagous arthropod comprising administering to said animal a complement inhibitor molecule or a functional equivalent thereof according to claim 1, a fusion protein thereof, a nucleic acid molecule comprising a nucleotide sequence encoding said complement inhibitor molecule or equivalent thereof, in conjunction with a pharmaceutically acceptable carrier, or a composition of any of the foregoing.
36. (canceled).
37. (previously presented) A method according to claim 35, wherein the haematophagous arthropod is *O. moubata*.
38. (previously presented) A method according to claim 37 wherein the disease or disorder is relapsing fever, African swine fever or West Nile fever.
39. (canceled).
40. (previously presented) A method for inhibiting the classical and alternative complement pathways in a cell, tissue or non-human organism comprising administering to said cell, tissue or organism, a complement inhibitor according to claim 1, a fusion protein thereof, or a nucleic acid molecule comprising a nucleotide sequence encoding said complement inhibitor molecule or equivalent thereof, in conjunction with a pharmaceutically acceptable carrier.